Sections in italics can be generic and are canned language.

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I. INTRODUCTION AND BACKGROUND

Introduction

This Statement of Basis/Proposed Plan (SB/PP) (or Interim Action Proposed Plan (IAPP)) is being issued by the United States Department of Energy (USDOE), which functions as the lead agency for Savannah River Site (SRS) remedial activities, with concurrence by the United States Environmental Protection Agency (USEPA) and the South Carolina Department of Health and Environmental Control (SCDHEC). The purpose of this SB/PP is to describe the preferred remedial alternative(s) for the (insert waste unit name), and to provide for public involvement in the decision-making process. The (insert waste unit name) is located at the SRS in Aiken County, South Carolina (see Figure (insert correct number)).

SRS manages certain waste materials that are regulated under the Resource Conservation and Recovery Act (RCRA), a comprehensive law requiring responsible management of hazardous waste. The (insert waste unit name) is a solid waste management unit under RCRA Section 3004(u). SRS received a RCRA hazardous waste permit from the SCDHEC, which was most recently renewed on September 5, 1995 (SC1 890 008 989). Module IV of the Hazardous and Solid Waste Amendments portion of the RCRA permit mandates corrective action requirements for non-regulated solid waste management units subject to RCRA 3004(u).

On December 21, 1989, SRS was included on the National Priorities List (NPL). The inclusion created a need to integrate the established RFI program with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements to provide for a focused environmental program. In accordance with Section 120 of CERCLA 42 USC Section 9620, USDOE has negotiated a Federal Facility Agreement (FFA) (FFA 1993) with the USEPA and SCDHEC to coordinate remedial activities at SRS into one comprehensive strategy which fulfills these dual regulatory requirements. The FFA lists the (insert waste unit name) as a RCRA/CERCLA unit requiring further evaluation using an investigation/assessment process that integrates and combines the RCRA

Facility Investigation (RFI) process with the CERCLA Remedial Investigation (RI) process to determine the actual or potential impact to human health and the environment of releases of hazardous substances to the environment.

Both RCRA and CERCLA require the public to be given an opportunity to review and comment on the draft permit modification and proposed remedial alternatives. Public participation requirements are listed in South Carolina Hazardous Waste Management Regulation (SCHWMR) R.61-79.124 and Sections 113 and 117 of CERCLA 42 USC Sections 9613 and 9617. These requirements include establishment of an Administrative Record File that documents the investigation and selection of remedial alternatives and allows for review and comment by the public regarding those alternatives (See Section II). The Administrative Record File must be established at or near the facility at issue. The SRS Public Involvement Plan (USDOE 1994) is designed to facilitate public involvement in the decision-making process for permitting, closure, and the selection of remedial alternatives. SCHWMR R.61-79.124 and Section 117(a) of CERCLA, as amended, require the advertisement of the draft permit modification and notice of any proposed remedial action and provide the public an opportunity to participate in the selection of the remedial action. [Insert this sentence if an interim action: *Because this is an interim action for this operable unit, a permit modification is not required.*] *A final permit modification will (1) include the final selection of remedial alternatives under RCRA, (2) be sought for the entire (insert waste unit name), and (3) include the necessary public involvement and regulatory approvals.*

SCHWMR R.61-79.124 requires that a brief description and response to all significant comments be made available to the public as part of the RCRA Administrative Record. Community involvement in consideration of this evaluation of alternatives for the (insert waste unit name) is strongly encouraged. All submitted comments will be reviewed and considered. Following the public comment period, a Responsiveness Summary will be prepared to address issues raised during the public comment period. The Responsiveness Summary will be made available with the final RCRA permit and the Record of Decision (ROD). [Replace the previous sentence with these sentences if an interim action: *The Responsiveness Summary will be made available with the Interim Record of Decision (IROD). A RCRA permit will not be issued since this is an interim action.*]

The final remedial decision will be made only after the public comment period has ended and all the comments have been received and considered. The final remedial decision under RCRA will be in the form of a final permit modification decision, which is made by SCDHEC. Selection of the remedial alternative that will satisfy the FFA requirements will be made by USDOE, in consultation with USEPA and SCDHEC. It is important to note that the final action(s) may be

different from the preferred alternative discussed in this plan depending on new information or public comments. The alternative chosen will be protective of human health and the environment and comply with all federal and state laws.

[Note: Delete reference to RCRA if a CERCLA only unit]

Background

SRS occupies approximately 310 square miles of land adjacent to the Savannah River, principally in Aiken and Barnwell counties of South Carolina. SRS is located approximately 25 miles southeast of Augusta, Georgia, and 20 miles south of Aiken, South Carolina.

SRS is owned by the USDOE. Management and operating services are provided by Westinghouse Savannah River Company (WSRC). SRS has historically produced tritium, plutonium, and other special nuclear materials for national defense. Chemical and radioactive wastes are byproducts of nuclear material production processes. Hazardous substances, as defined by CERCLA, are currently present in the environment at SRS.

II. COMMUNITY PARTICIPATION

The FFA Administrative Record File, which contains the information pertaining to the selection of the response action, is available at the following locations:

US Department of Energy
Public Reading Room
Gregg-Graniteville Library
University of South Carolina – Aiken
171 University Parkway
Aiken, South Carolina 29801
(803) 641-3465

Thomas Cooper Library
Government Documents Department
University of South Carolina
Columbia, South Carolina 29208
(803) 777-4866

Hard copies of the SB/PP (or IAPP) are available at the following locations:

Reese Library
Augusta State University
2500 Walton Way
Augusta, Georgia 30910
(706) 737-1744

Asa H. Gordon Library
Savannah State University
Tompkins Road
Savannah, Georgia 31404
(912) 356-2183

The RCRA Administrative Record File for SCDHEC is available for review by the public at the following locations:

The South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management
8901 Farrow Road
Columbia, South Carolina 29203
(803) 896-4000

Lower Savannah District Environmental Quality Control Office
218 Beaufort Street, Northeast
Aiken, South Carolina 29802
(803) 641-7670

The public will be notified of the public comment period through mailings of the SRS Environmental Bulletin, a newsletter sent to citizens in South Carolina and Georgia, and through notices in the Aiken Standard, the Allendale Citizen Leader, the Augusta Chronicle, the Barnwell People-Sentinel, and The State newspapers. The public comment period will also be announced local radio stations.

USDOE will provide an opportunity for a public meeting during the public comment period if significant interest is expressed. The public will be notified of the date, time, and location. At the meetings, the proposed action will be discussed, and questions about the action will be answered.

To request a public meeting during the public comment period, to obtain more information concerning this document, or to submit written comments, contact one of the following:

Jim Moore
Westinghouse Savannah River Company
Public Involvement
Savannah River Site
Building 742-A
Aiken, South Carolina 29808
1-800-249-8155
jim02moore@srs.gov

The South Carolina Department of Health and Environmental Control
Attn: J. T. Litton, P. E., Director
Division of Waste Management
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29202
(803) 896-4000

Following the public comment period, a ROD will be signed, and a final decision for the SRS RCRA permit will be issued. The ROD and RCRA permit will detail the remedial alternative chosen for this operable unit and include responses to oral and written comments received during the public comment period in the Responsiveness Summary. [Insert the following sentence for interim actions: *Since this is an interim action, a RCRA permit modification is not required.*]

If there were any SRS CAB activities or recommendations regarding the operable unit, include a summary in this section.

For an interim action delete references to RCRA.

III. OPERABLE UNIT BACKGROUND

Briefly describe **site history** including:

- History of waste generation or disposal that led to current problems
- History of Federal and State site investigations
- Identification of contaminated media at the site (e.g., soil, air, groundwater, and surface water)
- Description of removal or previous remedial actions conducted under CERCLA or other authorities

Briefly describe **site characteristics** including:

- Geographical or topographical factors that had a major impact on remedy selection (e.g., resources affected or threatened by site contamination such as current or potential drinking water sources or wetlands)
- Type of contamination and its vertical and lateral extent
- A site map that shows location of roads, buildings, drinking water wells and other characteristics that are important to understanding why the remedial objectives and preferred alternative are appropriate for the site
- Principal and low-level threat wastes (e.g., location of mobile/high toxicity/high concentration source material and immobile/low toxicity/low concentration source material)

Briefly describe major **public participation** activities prior to the issuance of the Proposed Plan**.**

IV. SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION

This section of the Proposed Plan should summarize the lead agency's overall strategy for remediating the site and describe how the action being considered in the Proposed Plan fits into that overall strategy. This section should

Summarize the overall cleanup strategy for SRS

Describe the scope of problems addressed by the operable unit (OU)

Describe how the action, being addressed in the Proposed Plan, relates to removal or other OUs at SRS (include purpose of each OU and sequence of the action in relation to other OUs or removals)

Identify how action addresses principal threat(s)

V. SUMMARY OF SITE RISKS

This section of the Proposed Plan should summarize the extent of contamination at the site and the risks posed to human health and the environment using information developed during the remedial investigation (RI). The summary of site risks should include key findings made in the baseline risk assessment conducted as part of the RI. This section should clearly link the site risks to the basis for action.

Summary of human health risk assessment

- Major human health constituents of concern (COCs) in each medium
- Potentially exposed populations in current and future risk scenarios (e.g., worker currently on site, adult or children living on site in the future)
- Exposure pathways (routes of exposure) and how they relate to current or reasonably anticipated future land, groundwater, and surface waste use
- Estimated cancer and non-cancer risks associated with exposure pathways for chemicals of concern that are driving the need to implement the preferred alternative

Summary of the ecological risk assessment (e.g., the basis of environmental risks associated with specific media and how these risks were determined)

- Major ecological COCs
- Potential ecological receptors, i.e., plant and animal populations, communities, habitats, and sensitive environments
- Potential exposure pathways, i.e., how ecosystems or other ecological receptors are likely to become exposed to COCs
- Describe potential ecological effects from exposure COCs

Summary of contaminant fate and transport analysis

- Major contaminant migration constituents of concern (CMCOCs)
- Modeled concentration and time to exceed a groundwater protection standard (e.g., MCL) or a risk-based concentration (RBC)

Identify whether principal threat source material or low-level threat source material exists at the unit (waste can not always be characterized as either one or the other; it is not a mandatory classification)

Conclude the risk section with a standard statement that supports the need for taking action, unless it is a "no action" situation.

"Actual or threatened releases of hazardous substances from this waste unit, if not addressed by the Preferred Alternative or one of the other active measures considered, may present a current or potential threat to public health, welfare, or the environment."

VI. REMEDIATION OBJECTIVES

Briefly describe the proposed remediation objectives (i.e., remedial action objectives) for the OU and how they mitigate site risks (e.g., prevent contamination from reaching the groundwater by treating the contaminated soils)

Present remediation goals (will become clean levels in the ROD) and their basis for major COCs (e.g., preliminary remediation goal of 5 ppm for TCE is based on Federal MCL for drinking water)

Identify potential ARARs for all alternatives in a table format.

Please note that interim actions should present interim remedial action objectives as well as final remedial action objectives (if known).

VII. SUMMARY OF ALTERNATIVES

Provide a brief narrative description of alternatives evaluated including remedy components and distinguishing features unique to each alternative. For each alternative, identify capital cost, operations and maintenance cost, and present worth cost, time to construct, and cleanup time.

Remedy components should include

- Treatment technologies employed and how they will reduce the intrinsic threat posed by the contamination
- Engineered controls including temporary storage and permanent on-site containment

- Institutional controls that will restrict future activities that might result in exposure to contamination (e.g., deed restrictions)

Distinguishing features may include

- Remedial objectives to be achieved by the alternative (e.g., return surface water to recreational use)
- Estimated quantities of material to be addressed by major components
- Implementation requirements (e.g., the need for an off-site disposal facility)
- Key ARARs or waiver of ARARs and any RCRA treatability or no migration variances
- Reasonably anticipated future land use and whether or not it will be achieved by the alternative
- Use of presumptive remedies or innovative technologies

Expected outcomes (e.g. remediation objectives that the alternative will attain)

VIII. EVALUATION OF ALTERNATIVES

Explain the nine evaluation criteria and how they are used to analyze the alternatives. The nine criteria are categorized into three groups: threshold criteria, primary balancing criteria, and modifying criteria. The threshold criteria must be satisfied in order for an alternative to be eligible for selection. The primary balancing criteria are used to weigh major tradeoffs among the alternatives. Generally, the modifying criteria are taken into account after public comment is received on the Proposed Plan. A glossary that defines the criteria may be used. The evaluation of alternatives may be presented in a matrix format along with text that explains the matrix.

The nine criteria are

Threshold Criteria

- Overall protection of human health and the environment
- Compliance with ARARs (or justify a waiver)

Primary Balancing Criteria

- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume through treatment
- Short-term effectiveness
- Implementability
- Cost

Modifying Criteria (if this information is not available yet, include a statement to that effect)

- State acceptance (include the status of the support agency's concurrence/non-concurrence with the Preferred Alternative)
- Community acceptance

IX. PREFERRED ALTERNATIVE

Briefly state the Preferred Alternative

- Use maps and figures, as necessary, to illustrate the preferred alternative

- If groundwater monitoring is required, describe monitoring and performance/effectiveness requirements (use maps and figures, as appropriate)

- For remedies that include institutional controls, use the following language.

  Per the US EPA – Region IV Land Use Controls (LUCs) Policy, a LUC Assurance Plan (LUCAP) for SRS has been developed and approved by the regulators. In addition, a LUC Implementation Plan (LUCIP) for the (insert site name) OU will be developed and submitted to the regulators for their approval with the post-ROD documentation. The LUCIP will detail how SRS will implement, maintain, and monitor the land use control elements of the (insert site name) OU preferred alternative to ensure that the remedy remains protective of human health and the environment.

  In the long term, if the property is ever transferred to nonfederal ownership, the US Government will take those actions necessary pursuant to Section 120(h) of CERCLA. Those actions will include a deed notification disclosing former waste management and disposal activities as well as remedial actions taken on the site. The deed notification shall, in perpetuity, notify any potential purchaser that the property has been used for the management and disposal of waste. These requirements are also consistent with the intent of the RCRA deed notification requirements at final closure of a RCRA facility if contamination will remain at the unit.

  The deed shall also include deed restrictions precluding residential use of the property. However, the need for these deed restrictions may be reevaluated at the time of transfer in the event that exposure assumptions differ and/or the residual contamination no longer poses an unacceptable risk under residential use. Any reevaluation of the need for the deed

restrictions will be done through an amended ROD with USEPA and SCDHEC review and approval.

In addition, if the site is ever transferred to nonfederal ownership, a survey plat of the OU will be prepared, certified by a professional land surveyor, and recorded with the appropriate county recording agency.

State that the Preferred Alternative can change in response to public comment or new information.

Provide a brief statement that describes the most decisive consideration from the nine criteria analysis that affected the selection of the Preferred Alternative (e.g., completion of remedy sooner and at less cost than other alternatives).

Detail any uncertainties or contingency measures.

Describe the expected outcomes of the Preferred Alternative, including risk reduction (how risk identified in the baseline risk assessment will be addressed).

Summarize the support agency's concurrence or non-concurrence with the Preferred Alternative, if known.

Include a summary statement by the lead agency at the end of this section similar to:

Based on information currently available, the lead agency believes the Preferred Alternative provides the best balance of tradeoffs among the other alternatives with respect to the evaluation criteria. The (insert name of lead agency) expects the Preferred Alternative to satisfy the statutory requirements in CERCLA Section 121(b) to: (1) be protective of human health and the environment, (2) comply with ARARs (or justify a waiver), (3) be cost-effective, (4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable, and (5) satisfy the preference for treatment as a principal element (or justify not meeting the preference).

[This statement is not necessary for a No Action decision.]

X. POST-ROD SCHEDULE

For interim actions, include an implementation schedule showing interim submittals and interim actions, additional documents leading to the final ROD, post-ROD documents, and the Final Remedial Action start.

For final actions, include an implementation schedule showing ROD date, post-ROD document submittals, and Remedial Action Start date.

REFERENCES

Provide a list of the references that are referred to in the ROD.

GLOSSARY